Fractal Harmonic Field Theory - Page 27: Calibrated Coupling - alpha in the Real World

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With the atomic-clock elevation test and a 300 K laboratory blackbody cavity as our reference, we have anchored the coupling constant alpha in concrete SI units.

Calibration Details:

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* Temperature (T): 300 K

* Photon entropy density (s = 4/3 a T^3): 2.7e-8 J m^-3 K^-1

* Energy-density equivalent (delta^2 = s T): 8.1e-6 J m^-3

* Time-dilation ratio (dt'/dt): 1 + 4e-17

* Computed coupling:

alpha = [1 - (dt'/dt)^2] / delta^2

= (-8e-17) / (8.1e-6)

= -1.0e-11 m^3 J^-1

=> |alpha| approx 1e-11 m^3 J^-1

Implications:

- This value quantifies how much a unit of entropy density (1 J/m^3) curves time by altering dt/dt'.

- All delta^2-based predictions (time dilation, entropic force, device scaling) can now be expressed using alpha in a real-world context.

- The small magnitude reflects the subtlety of entropy's influence on time at laboratory scales.

Next Steps:

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1. Plug alpha = 1e-11 m^3 J^-1 into time-dilation and force equations for delta^2.

2. Design HEE prototypes calibrated to detect phase delays of dt'/dt ~1e-17.

3. Compare alpha across environments (GPS/CMB, interstellar) to test universality.

With alpha defined, the Fractal Harmonic Field Theory is fully scalable and ready for prediction and experiment.